OMB APPROVAL #: 2700-0042

SOLICITATION/CONTRACT/ORDER FOR COMMERCIAL ITEMS

OFFEROR TO COMPLETE BLOCKS 12, 17, 23, 24, & 30

1. REQUISITION NUMBER	PAGE 1 OF

2. CONTRACT NO.	3. AWARD/EFFECTIVE DATE	4. ORDER NUMBER	5. SOLICITATION NO.	6. SOLICITATION ISSUE DATE
			RFO 13-SSC-0-97-21	May 23, 1997

7. FOR SOLICITATION INFORMATION CALL:	a. NAME	b. TELEPHONE NUMBER *(No collect calls)*	8. OFFER DUE DATE/ LOCAL TIME
	Rebecca S. Dubuisson	(60l) 688-1636	June 20, 1997 2:00 p.m.

9. ISSUED BY: CODE 64	10. THIS ACQUISITION IS	11. DELIVERY FOR FOB DESTINATION UNLESS BLOCK IS MARKED	12. DISCOUNT TERMS
NASA Procurement Office, Code DA30 John C. Stennis Space Center Stennis Space Center, MS 39529-6000	[X] UNRESTRICTED [ ] SETASIDE:__% FOR [ ] SMALL BUSINESS [ ] SM . DIS BUSINESS [ ] 8(A) SIC: 5099 SIZE STANDARD: 100	[ ] SEE SCHEDULE [X] 13a. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 700) 13b. RATING DO-C9 14. METHOD OF SOLICITATION [ ] RFQ [ ] IFB [X] RFO	

15. DELIVER TO CODE	16. ADMINISTERED BY CODE
NASA Attn: Kern Witcher/XAOO John C. Stennis Space Center Stennis Space Center, MS 39529-6000	Same as Item 9

17a. CONTRACTOR/ OFFEROR CODE / FACILITY CODE	18a. PAYMENT WILL BE MADE BY CODE EA22
TELEPHONE NO.	NASA Office of the Chief Financial Officer Mail Code EA22 John C. Stennis Space Center Stennis Space Center, MS 39529-6000 Invoices must annotate contractorís Taxpayer Identification Number
[ ] 17b. CHECK IF REMITTANCE IS DIFFERENT AND PUT SUCH ADDRESS IN OFFER	18b. SUBMIT INVOICES TO ADDRESS SHOWN IN BLOCK 18a. UNLESS BLOCK IS CHECKED [ ] SEE ADDENDUM

19. ITEM NO.	20. SUPPLIES/SERVICES	21. QTY	22. UNIT	23. UNIT PRICE	24. AMOUNT
1.	The contractor shall provide all resources necessary to furnish Scientific Data Product/Set which includes Data Product/Set, Description of Data Product/Set, Metadata Files, Calibration Files, and Pricing Matrix *(Attach Additional Sheets as Necessary)*	1	LOT		

25. ACCOUNTING AND APPROPRIATION DATA

26. TOTAL AWARD AMOUNT *(For Govt. Use Only)*

[X]	27a. SOLICITATION INCORPORATES BY REFERENCE FAR 52.212-1 and 52.212-4. FAR 52.212-3 and 52.212-5	[X] ARE	[ ] ARE NOT ATTACHED.
[ ]	27b. CONTRACT/PURCHASE ORDER INCORPORATES BY REFERENCE FAR 52.212-1. FAR 52.212-5 IS ATTACHED. ADDENDA	[ ] ARE	[ ] ARE NOT ATTACHED.

28. CONTRACTOR IS REQUIRED TO SIGN THIS DOCUMENT AND RETURN _*_ COPIES	29. AWARD OF CONTRACT: REFERENCE _____ OFFER\
[ ] TO ISSUING OFFICE, CONTRACTOR AGREES TO FURNISH AND DELIVER ALL ITEMS SET FORTH OR OTHERWISE IDENTIFIED ABOVE AND ON ANY ADDITIONAL SHEETS SUBJECT TO THE TERMS AND CONDITIONS SPECIFIED HEREIN.	[ ] DATED_____. YOUR OFFER ON SOLICITATION (BLOCK 5) INCLUDING ANY ADDITIONS OR CHANGES WHICH ARE SET FORTH HEREIN IS ACCEPTED AS TO ITEMS:

30A. SIGNATURE OF OFFEROR/CONTRACTOR	31a. UNITED STATES OF AMERICA *(SIGNATURE OF CONTRACTING OFFICER)*

30b. NAME AND TITLE OF SIGNER *(TYPE OR PRINT)*	30c. DATE SIGNED	31b. NAME OF CONTRACTING OFFICER *(TYPE OR PRINT)*	31c. DATE SIGNED
		REBECCA S. DUBUISSON	

32a. QUANTITY IN COLUMN 21 HAS BEEN	33. SHIP NUMBER	34. VOUCHER NUMBER	35. AMOUNT VERIFIED CORRECT FOR
[ ] RECEIVED [ ] INSPECTED [ ] ACCEPTED, AND CONFORMS TO THE CONTRACT, EXCEPT AS NOTED	[ ] PARTIAL [ ] FINAL		
	36. PAYMENT [ ] COMPLETE [ ] PARTIAL [ ] FINAL		37. CHECK NUMBER
32b. SIGNATURE OF AUTHORIZED GOVT. REPRESENTATIVE / 32c. DATE	38. S/R ACCOUNT NUMBER	39. S/R VOUCHER NUMBER	40. PAID BY
	42a. RECEIVED BY (Print)		
41a. I CERTIFY THIS ACCOUNT IS CORRECT AND PROPER FOR PAYMENT			
41b. SIGNATURE AND TITLE OF CERTIFYING OFFICER / 41c. DATE	42b. RECEIVED AT (Location)		
	42c. DATE RECíD *(YY/MM/DD)*	42d. TOTAL CONTAINERS	

CONTINUATION OF BLOCKS FROM SF 1449

Block 18: The contractor shall not submit an invoice until delivery and acceptance of the supplies described in Block 20 of the SF 1449 and in the Continuation Sheet to SF 1449. The terms and conditions for payment are ìcash on delivery and acceptanceî.

Data Set or Product: The specific data set or data product is to be delivered on a medium suitable for use by NASA. Media may include CD-ROM, 8-MM or Exabyte tape, or any standard data storage and transfer medium. The data must be received in some form of ìhardî medium rather than being transferred across the Internet to ensure that backup copies of the original data will exist. If CD-ROM is used as the medium of data transfer, the data must be in ISO-9660 compatible format suitable for use on UNIX, Macintosh, and IBM-compatible personal computers. (A data set is defined as data that has been acquired by some means and is provided in its raw format, has been calibrated or has been atmospherically corrected. A data product is defined as data where value has been added by processing, fusing, or enhancing it to convey specific information.)

Description of Data Sets or Products: A complete description of the data sets or products is a necessary portion of the deliverable and must accompany the data set or product. The description will include all of the basic information about the file, including the file formats and data structure. It is preferred that this information be included as a hard copy document, although in some cases a text file in the format of a ìREADMEî file may be acceptable.

Metadata Files: Metadata files should include any information about the data files or products, including information on the sensor, date and time of acquisition, weather conditions on the date of acquisition, and any other relevant information that may be used to discern characteristics of the data. A Header file is sometimes considered metadata if it is not intrinsically necessary to the data set or product. A contact person having knowledge of the data set must be listed to ensure that any questions about the data may be answered. All metadata shall comply with the current Federal Geographic Metadata Standards.

Calibration Files: All calibration files for each individual data set or product are required to allow in-house calibration by the science teams as well as to test the quality of the data. These files should include any on-board calibration collected during data acquisition as well as any calibration files necessary to process the data properly.

Estimated Updated Price Matrix: An updated price matrix detailing the proposed data delivery schedule and the data set and product prices shall be provided. The temporal aspects of the data purchase will be negotiated under phase II of the solicitation process.

LIST OF ATTACHMENTS AND ADDENDA

Attachment	Title
1	Contract Terms and Conditions
2	Technical Requirements
3	Offeror Representations and Certifications

Addenda	Title
1	Instructions to Offerors (FAR 52.212-1)
2	Additional FAR/NFS Provisions
3	Evaluation Process

ATTACHMENT 1 - CONTRACT TERMS AND CONDITIONS

1. Contract Terms and Conditions to Implement Statutes or Executive Orders - Commercial Items (FAR 52.212-5) (AUG 1996)

(a) The Contractor agrees to comply with the following FAR clauses, which are incorporated by reference, to implement provisions of law or executive orders applicable to acquisitions of commercial items:

52.222-3 Convict Labor (E.O. 11755)

52.233-3 Protest After Award (31 U.S.C. 3553)

(b) The Contractor agrees to comply with the following FAR and NASA FAR clauses in this paragraph (b), the contracting officer has indicated as being incorporated by reference to implement provisions of law or executive orders applicable to acquisitions of commercial items or components:

52.203-6 Restrictions on Subcontractor Sales to the Government, with Alternate I (41 U.S.C. 253g and 10 U.S.C. 2402)

52.203-10 Price or Fee Adjustment for Illegal or Improper Activity (41 U.S.C. 423)

52.219-8 Utilization of Small, Small Disadvantaged and Women-Owned Business Concerns (OCT l995)

52.219-9 Small, Small Disadvantaged and Women-Owned Business Subcontracting Plan (AUG 1996)

52.222-26 Equal Opportunity (E.O. 11246)

52.222-35 Affirmative Action for Special Disabled and Vietnam Era Veterans (38 U.S.C. 4212)

52.222-36 Affirmative Action for Handicapped Workers (29 U.S.C. 793)

52.222-37 Employment Reports on Special Disabled Veterans and Veterans of the Vietnam Era (38 U.S.C.4212)

52.225-3 Buy American Act - Supplies (41 U.S.C. 10)

52.225-9 Buy American Act -- Trade Agreement Act -- Balance of Payments Program (41 U.S.C. 10, 19 U.S.C. 2501-2582)

(c) Comptroller General Examination of Records. The Contractor agrees to comply with the provisions of this paragraph (c) if this contract was awarded using other than sealed bid, is in excess of the simplified acquisition threshold, and does not contain the clause at 52.215-2, Audit and Records-Negotiation:

(1) The Comptroller General of the United States, or an authorized representative of the Comptroller General, shall have access to and right to examine any of the Contractor's directly pertinent records involving transactions related to this contract.

(2) The Contractor shall make available at its offices at all reasonable times the records, materials, and other evidence for examination, audit, or reproduction, until 3 years after final payment under this contract or for any shorter period specified in FAR Subpart 4.7, Contractor Records Retention, of the other clauses of this contract. If this contract is completely or partially terminated, the records relating to the work terminated shall be made available for 3 years after any resulting final termination settlement. Records relating to appeals under the disputes clause or to litigation or the settlement of claims arising under or relating to this contract shall be made available until such appeals, litigation, or claims are finally resolved.

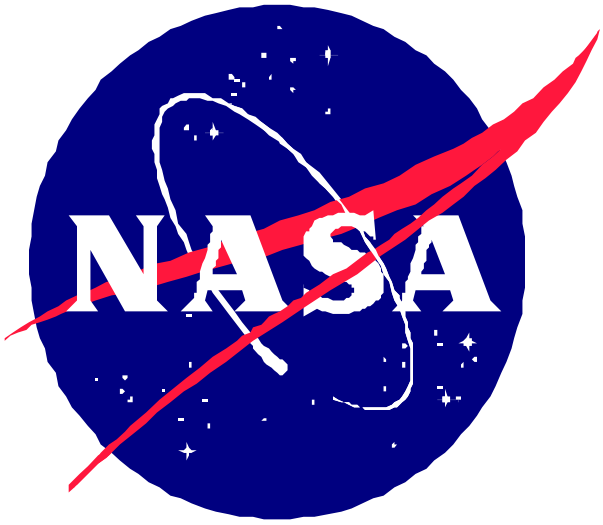
(3) As used in this clause, records include books, documents, accounting procedures and practices, and other data, regardless of type and regardless of form. This does not require the Contractor to create or maintain any record that the Contractor does not maintain in the ordinary course of business or pursuant to a provision of law.

(d) Notwithstanding the requirements of the clauses in paragraphs (a), (b) or (c) of this clause, the Contractor is not required to include any FAR clause, other than those listed below, in a subcontract for commercial items or commercial components.

52.222-26 Equal Opportunity (E.O. 11246)

52.222-35 Affirmative Action for Special Disabled and Vietnam Era Veterans (38 U.S.C. 2012(a))

52.222-36 Affirmative Action for Handicapped Workers (29 U.S.C. 793)



ATTACHMENT 2

MTPE Scientific Data Buy Program

Phase I

Table of Contents

1. Introduction

This solicitation is the first phase of a two phase program to qualify and purchase data sets or products for the Mission to Planet Earth (MTPE). MTPE seeks data sets which will provide critical new science measurements or more cost effective ways of extending the current Earth Observation System (EOS) data sets.

The overall science goal of MTPE is to provide long-term understanding of the Earth system needed to protect our global environment for current and future generations. The results of MTPE are essential to the broader national goals for a sustainable America (PCSD, 1996). The United States, through the U.S. Global Change Research Program (USGCRP), along with other nations, supports the research needed to characterize and understand interactions between localities and global change. Global change research provides fundamental knowledge leading to increased efficiency in the use of natural resources and improved prediction of weather and climate. The application of scientific knowledge significantly enhances the relevance of the MTPE program to critical issues of sustainable development.

2. Background

NASA is exploring new ways of doing business that will result in faster, better, and cheaper methods for achieving scientific research results. The Administration supports such efforts and, to encourage use of relevant private sector capabilities, the President's Space Policy directs NASA to establish a demonstration program to purchase data products from the private sector. Accordingly, $50 million was proposed for a data purchase in the NASA FY 1997 budget and Congress included this amount in NASA's 1997 budget appropriation. In addition to obtaining important MTPE data sets/products, the demonstration program will enable NASA to better assess the willingness of industry to accept a major portion of the up-front financial risk associated with this effort and its ability to provide useful data products in a cost-effective and timely manner.

3. Purpose

The science requirements identified in this solicitation address key uncertainties about the national and global environmental changes and the Earth system. The purpose of this Request for Offer (RFO) is to acquire scientific information that will support research themes identified in section 5, Attachment 2.

This data purchase solicitation seeks to augment and extend the EOS measurement sets through contracts to purchase data that private sector participants identify as meeting critical elements of the science goals of the MTPE Program and that these participants agree to develop and deliver on a ìcash on deliveryî (COD) basis. This program is not intended to fund any research activities directly but to provide data sets or products for use in research activities funded within MTPE.

In issuing this solicitation, the Government is attempting to obtain the maximum value for its investment of taxpayer dollars by challenging the private sector to create and sell

necessary scientific data sets or products with no Government oversight. This process may involve additional risk to the data providers because the Government will not provide development funding for these data sets or products. NASA has attempted to minimize this risk with a two-phase approach developed for this solicitation. The Government also recognizes that this procurement approach will significantly change the scope of the offeror's activities because it will be the specific responsibility of the offerors to define the linkages and value of their proposed products to the proposed science issue for which the data will be used. In summation, this solicitation is intended to demonstrate the effective integration of the requirements of the scientific community and capabilities of the U.S. remote sensing industry.

The Government believes that this solicitation is especially timely due to the increasingly close relationship between (1) its Earth-focused scientific data needs, and (2) the increasing interest of the private sector in developing satellite and other systems that provide data relevant to management of the Earthís resources. It is anticipated that this approach will also shorten the time between inception and application to practical problem solving and routine operations.

4. Program Approach

This data purchase will be completed in two phases under separate contracts. Figure 1 depicts this two-phase process. A two-phase approach makes it possible to evaluate the critical characteristics and value of the proposed data before actually committing to additional specific data purchases. Funding for phase I and II of this program is currently $50 million. Upon successful completion of phase I (the delivery of scientifically acceptable and validated simulated or prototype data sets), the offeror qualifies for phase II (production) purchases. **Those qualified phase I products whose phase II purchase would exceed the $50M may be candidates for funding from other MTPE programs under this solicitation.** The qualification of phase I data sets or products does not constitute a commitment from the Government for any additional purchases of data sets or products.

4.1 Phase I

In the first phase, prospective data providers are requested to submit proposals identifying data sets or products that address the scientific requirements outlined in section 5, Attachment 2. These proposals will be evaluated against the science, price, and performance characteristics in addendum 3. If the phase I proposal is accepted, NASA and the offeror will negotiate the period of performance (up to 6 months), price, delivery schedule, validation plan, and data rights for the products to be delivered. The data delivered under phase I can be simulated or prototypical data sets or products. Upon receipt of these deliverables described in Block 20 of the SF 1449 and the Continuation Sheet to the SF 1449, the data provider will be paid and a 2- to 4-month evaluation and validation period will begin. The data will be validated by the Commercial Remote Sensing Program Office at Stennis Space Center (SSC) in cooperation with a MTPE science team and the data provider. This validation process will ensure that the delivered product meets the data specifications provided in the

phase I proposal. It will be the offerorís responsibility to determine to which of the MTPE science themes their data are applicable. If it is determined that a data set or product submitted will not meet the scientific requirements or does not meet the proposed specifications, additional data will not be purchased from the data provider and the data provider will not be a participant in phase II of this requirement. The duration of phase I and entry into phase II will be determined on an individual contract basis to minimize the latency between phases.

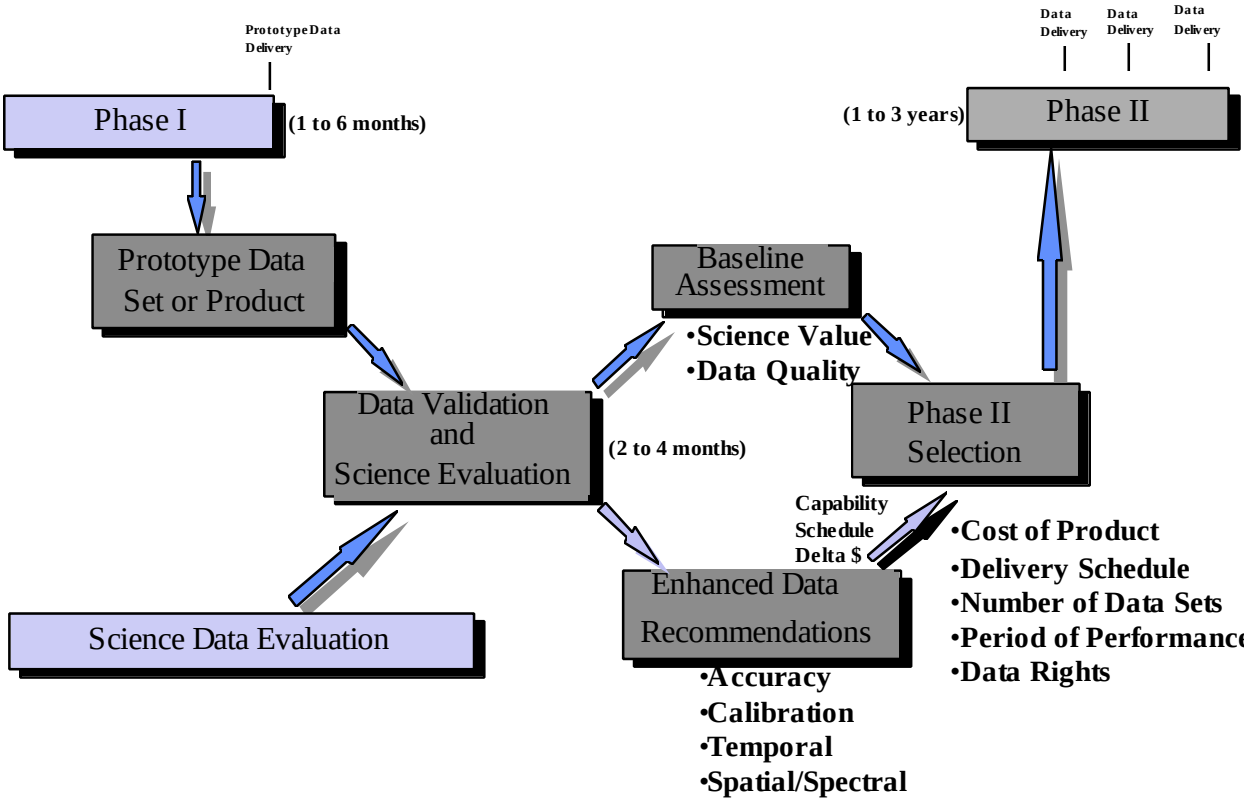


Figure 1. Two-phase data purchase process.

Once the data have been evaluated by the MTPE science team and validated at SSC, the evaluation and validation team will submit an evaluation report summarizing the science value of the data sets or products. In addition, where it appears that relatively minor improvements would make the initial products scientifically valuable or would significantly increase the value of acceptable products, the MTPE science team will provide recommendations for potential enhancements to the data. This information will be provided to the data provider for consideration. If a phase II solicitation is issued, the data provider then has the option of offering the enhanced data set/ product or offering the baseline data proposed in phase I. After submitting a phase II proposal, a commitment on future data sets or products will be negotiated and integrated into the MTPE research activities.

For phase I, NASA intends to make multiple data buy awards of up to $500,000 for data sets and data products to be delivered over a defined time period. NASA reserves the right to make no awards should it find that none of the proposals meets the needs of the MTPE science teams or provides best value to the Government.

4.2 Phase II

The second phase of the data purchase solicitation will consist of contracts between the Government and those data providers that have successfully completed the first phase of the solicitation process and have provided data that have been determined by the science evaluation team to be of value to the MTPE program. A letter RFO describing the quantity of data, delivery dates, data characteristics (baseline or enhanced) and the performance period will be issued to the data provider. Specific data sources will then be selected to enter into contracts of 1 to 3 years.

4.3 Optional Offers

As part of the new way of doing business, NASA plans to use approaches similar to the MTPE Scientific Data Buy whenever it is within the ability of industry to respond to and accept the terms and conditions offered. Recognizing the pathfinding nature of this MTPE Scientific Data Buy, NASA will consider optional offers that exceed the existing $50M budget if the offeror accepts the terms and conditions provided in this solicitation and the offer provides the best value to the Government in executing the MTPE program. If selected, funding for these optional offers will be provided by augmenting the existing $50m budget prior to phase II contract awards. Optional offers will be evaluated and subject to the same terms and conditions as other offers under this solicitation. The Government, at its option, may unilaterally determine not to pursue optional offers and will so notify offerors during the phase I process. Consideration of optional offers will be contingent upon the availability of funds.

5. Science Requirements

5.1 Science Research Themes

This solicitation offers a new challenge to the remote sensing data acquisition and delivery community. Potential data providers must understand the scientific goals of NASAís MTPE program sufficiently to identify what scientific data they may provide that will not only fulfill the science themes of research but will also be cost effective. NASA is not requesting that the data provider community solve the scientific problems of MTPE, but rather that the community deliver the data sets and products, which provide scientific measurements over a specific area, a specific region, or the entire Earth for specific time periods.

Requirements for the data to be provided under this solicitation are based upon the Mission to Planet Earth Science Research Plan, V.1, September 1996, which contains NASAís research plans and data needs. This document should be consulted to understand the science program and the characteristics of its data requirements.

The science program contains five major program elements (science themes):

1) Land-Cover and Land-Use Change Research
2) Seasonal-to-Interannual Climate Variability and Prediction
3) Natural Hazards Research and Applications
4) Long-Term Climate: Natural Variability and Change Research
5) Atmospheric Ozone Research

The research plans presented in the above-noted report are deliberately broad, while providing overall direction and scope, to enable the programs to grow and evolve through time. To add specificity, some data criteria have been developed for this solicitation. Table 1 provides data set types that have been identified as being of the greatest value to each science theme. A more complete explanation of each science theme and the high priority data set types is provided in Appendix A.

Table 1. Critical Data Sets

Science Area	Data Set or Product Use
Land-Cover and Land-Use Change Research	1) Quantify past, present, and future land-cover and land-use patterns at regional and global scales 2) Understand natural and human-induced influences that lead to changes in land cover, land use, and marine ecosystems 3) Support scientific requirements of the National Environmental Monitoring and Research 4) Support design of a prototype environmental report on trends in and the status of the U.S. environment 5) Improve methods for the sustainable management of farmlands, forests, rangelands, and coastal marine resources
Seasonal-to-Interannual Climate Variability and Prediction	6) Measure globally distributed atmospheric wind profiles 7) Provide atmospheric sounding for weather and climate prediction

Natural Hazards and Research and Applications	8) Improve methods and understanding of how to best characterize and mitigate the consequences of natural hazards for both managed and natural ecosystems
Long Term Climate: Natural Variability and Change Research	9) Test the utility of new measurements to meet the continuity requirements of the EOS science program

5.2 EOS Measurement Continuity Test Sets

NASA is currently conducting a biennial review of MTPE to determine how best to provide continuity in the EOS science measurement areas needed to meet the MTPE and EOS science objectives. A component of the review is to determine the best means to acquire data in the key measurement areas after the predicted lifetime of the first EOS satellites (2004 or soon thereafter). These studies are also examining the possibility of obtaining the data for these measurements from smaller instruments and thus smaller and cheaper satellites and launch vehicles. Because the scientific requirement of follow-on measurements is to be qualitatively the equivalent of the first series of EOS instruments, NASA is very interested in buying data from new sensors concurrently with the first EOS series to evaluate whether these new sources of data sets can replace the first series of EOS sensors. The current measurement areas, the instruments that provide key measurements in those areas, and the satellites on which they will fly are provided in Table 1, Appendix A. Further information on these instrument characteristics and detailed descriptions of their data products can be found in the MTPE Reference Handbook.

Generally, the criteria for replacements to existing or planned EOS data sets are as follows:

- In order for a “replacement” data product to be “qualitatively” equivalent to a current measurement, it must meet established requirements for validation, timeliness, and spatial scale, because it will be compared against data sets already well defined by a working science team, possibly involving continuity with a precursor data set.
- The proposed data set may be a continuation data set from an instrument which has flown or may be a new data set that qualitatively matches one of the products currently defined in the MTPE program. A data set where a phase C/D contract (or equivalent) has been awarded for an instrument or produced under an international memorandum of understanding will not be considered.
- The data set may be produced by an instrument designed under MTPE or another program. The offeror may make any arrangements for flying the instrument that produces the data set on a U.S. Government spacecraft (as long as full-cost reimbursement is made to the Government). The requirement is for functional equivalence of the data that is or that can be produced. Burden of proof lies with the offeror.

5.3 Other Considerations

5.3.1 Integrated Data Sets

As noted in the MTPE Science Research Plan, Earth science problems are complex and are seldom capable of being fully understood from the data of a single sensor. Thus the development of integrated data sets is of great interest to the science program. While the intent of this solicitation is to purchase data products primarily derived from satellite data, it is of special interest for the purposes of this procurement to take maximum advantage, when it benefits the science objectives, of the increasing capabilities for integrating disparate data sets (i.e., radar and optical; 1-meter and 30-meter resolution; panchromatic and multispectral; and ground, aircraft and satellite observations).

5.3.2 Duration and Spatial Coverage

The scope and amount of the data to be offered can vary widely, from regional to global in spatial coverage and in duration from months to years to decades. The coverage will be determined by the requirements of the science problem being addressed. However, the temporal coverage has additional constraints imposed by both the limited funding level and the finite duration of the present solicitation. These limits will require that the offeror's price proposes long-duration data streams on the basis of delivering data for an initial period that fits within the present $50 million budget for all selected data sets and data distribution support with price quotations for additional purchase periods.

The data provider should also note that while the major thrust of the U.S. Global Change Research Program requires the measurement of change over multiple decades, shorter time series (months to several years) will be needed for two purposes. One, the data sets created to demonstrate that data from a new sensor can be used to continue the measurements of current EOS science parameters seamlessly and two, the data required to support a time-limited science campaign or to support an Earth system process investigation. Validation of a new sensor system technology to continue the collection of EOS is as important as the collection of new data set types.

5.3.3 Calibration

Most of the scientific uses of the satellite data require comparison with other data sources, including other satellite sources, aircraft, and ground measurement. An important consideration is that the comparisons with other data sets must be made over extended periods of time lasting years to decades. This requirement makes calibration and validation of the science products of prime importance. Calibration must be maintained at a suitable level for the expected variations in the phenomena being measured. The data provider is expected to perform calibration and validation sufficient for the science problem that will be addressed by their data.

6. Other Sources of Information

Additional information on the MTPE and EOS program can be found in the following documentation and NASA World Wide Web sites:

- NASA Mission to Planet Earth Science Research Plan, (1996) R. Harriss et al.

  http://www.hq.nasa.gov/office/mtpe/visions/visions.html
- Mission to Planet Earth/Earth Observing System Reference Handbook, (1995) G. Asrar and R. Greenstone.
  http://www.hq.nasa.gov/office/mtpe/education/education.html
- Science Strategy for the Earth Observing System, (1994) G. Asrar and J. Dozier.

  http://www.hq.nasa.gov/office/mtpe/education/education.html
- NASA MTPE Home Page: http://www.hq.nasa.gov/office/mtpe
- EOS Project Office Home Page: http://spso.gsfc.nasa.gov/spso_homepage.html
- MTPE Commercial Strategy, March 1997.
  http://www.hq.nasa.gov/office/mtpe/visions/visions.html

7. Validation Plan

See Addendum No. 1, Instructions to Offers, for instructions regarding the validation plan.

8. Intellectual Property Rights Data and Data Products

As part of the phase I offers, the data provider will discuss data rights provisions as delineated in Addendum No. 1.

9. Best Value Characteristics

Offers submitted in response to this NASA RFO will be judged on two sets of best-value characteristics as provided in Addendum 3 of the RFO.

10. Deliverables

Deliverables are delineated in Block 20 of the SF 1449, as further described in the Continuation to SF 1449.

Appendix A

SCIENTIFIC RESEARCH THEMES
FOR THE
MTPE SCIENTIFIC DATA BUY

BACKGROUND

The following paragraphs identify high priority scientific issues which must be resolved to achieve the goals of the U.S. Global Change Research Program, National Science and Technology Council Committee on Natural Resources and the Environment, and President's Council on Sustainable Development. The questions are broadly defined to allow Offerors to fully define the most creative pathways to appropriate data sets. It is expected that proposed data will be derived from a combination of new sources, and through unique methods of data fusion using existing data.

SCIENCE AREA: Land-Cover and Land-Use Change Research

Changes in land cover and land use are poorly documented and understood in the U.S. and around the world. This problem is especially acute in many coastal areas where population and commerce are concentrated. The MTPE and USGCRP are implementing the Earth Observation System (EOS) to provide global information on changes in terrestrial and coastal ecosystems at relatively low spatial resolution. A significant gap in the current design for acquiring scientific information is a comprehensive assessment of how natural and human-related driving forces of environmental change are expressed as a function of both spatial and temporal scales. Episodic, intense forces operating at local-to-regional scales at many places around the nation and the globe can have an important cumulative influence on global change. It is also clear that the most important human consequences of environmental change occur at local scales. Urbanization and agriculture are two major drivers of environmental change. Efforts to sustain the ecological and environmental goods and services, that are required to support continuing economic progress, will require understanding of natural resource dynamics at local scales to support both scientific research and the development of improved resource management tools and methods. The following data and scientific information are required to provide researchers with an improved basis for understanding, assessing, predicting, and responding to the causes and consequences of changes in terrestrial and coastal marine ecosystems from natural and human-related influences:

1. Quantify the past, current and future land cover and land use patterns at regional and global scales:

The USGCRP has a continuing effort to monitor and inventory the current land cover of the Earth at 1-km spatial resolution. MTPE currently sponsors some research on land cover change at finer spatial resolutions. MTPE seeks scientific data products to enhance research on new and improved methods for measuring and land cover and land use change. The information required will most likely come from the development of new remote sensing technologies, or from unique methods of data fusion applied to existing data. There is currently no comprehensive, systematic effort to synthesize a state-of-the-art data base on land cover, land use, and shoreline change for North America. There are also significant limitations in scientific understanding of how best to combine existing data, or specify future data requirements, to quantitatively document changes in critical ecosystem characteristics. For example, what spectral, spatial, and temporal sampling is necessary to document land cover and land use changes in complex multi-use landscapes typical of North America? How can existing or new data from ground-based, airborne, and/or satellite sources be integrated to provide the basis for research on the design of a world crop monitoring system, a forest monitoring system, or a shoreline monitoring system? What level of spectral, spatial, and temporal resolution is necessary to provide accurate documentation of stress or changes in specific local habitats which are important to the maintenance of environmental quality or biodiversity (e.g., wetlands, floodplains, groundwater recharge areas, etc.)? MTPE seeks data products that would document land cover change in the U.S. (including Alaska) over the last three decades at a spatial resolution that approximates Landsat, or better. The databases provided might result from the fusion and/or analysis of data from many sources including recently declassified intelligence satellite photographs, Landsat, synthetic aperture radar, aircraft remote sensing, and a variety of in situ measurements. A validation plan must be part of the proposal.

2. Understand natural and human-induced influences that lead to changes in land cover, land use, shorelines, or terrestrial and marine ecosystems through integration of remote sensing and socioeconomic data.

The magnitude, spatial scale, and pace of land cover and land use change may have accelerated over the past several centuries. Gaining a better understanding of the factors that determine land cover, land use, and terrestrial and marine ecosystem change is a priority concern of the global change research community. A primary challenge in this area of study is the integration of remote sensing data with socioeconomic data. The MTPE program seeks scientific data products which will enhance scientific research on the prediction of the sensitivity, vulnerability, and resilience of ecosystems to natural and human-induced change. This scientific information should be especially useful for local and regional areas where there are indications of a conflict between economic development goals and the sustainability of natural resources. It is expected that scientific information necessary to enhance research on these issues will require the integration and fusion of multiple data sources

in a geographic information system (GIS). New sources of remote sensing data from airborne or satellite platforms are also likely to make a contribution to these issues by providing unique spectral, spatial, or temporal information. The data provider should clearly specify how the products proposed will address the challenge of determining linkages between human activities and changes in terrestrial and marine environments. Products may result from a new, innovative measurement technology, or be the result of unique methods for combining existing in situ and remote sensing data through data fusion. Offerors should not duplicate any of the data sets available at the NASA Socioeconomic Data and Applications Center address (http://sedac.ciesin.org).

3. Support the Scientific Information Requirements for National Environmental Monitoring and Research.

The Office of Science and Technology Policy is leading an interagency initiative to make fundamental improvements in the way that the U.S. monitors its environment. Current monitoring programs do not provide integrated data across multiple natural resources at the various temporal and spatial scales needed to develop policies based on current scientific understanding of Earth system processes. New developments in science and technology provide new opportunities for collecting and organizing data that could greatly expand our capabilities for achieving a sustainable trajectory for the nation's future.

A critical need exists to synthesize scientific information from new and existing environmental observation technologies with comprehensive socioeconomic data to increase our understanding of the significance of interactions among resources, their linkages to variations in the natural and human environment, and their responses to multiple drivers of change. These integrated environmental assessments should identify environmental and ecosystem trends, relate these trends to their causes and consequences, and predict outcomes of alternative future socioeconomic and climatic scenarios. One of the principal recommendations from the draft National Environmental Monitoring Framework document is to increase the use of remotely sensed information obtained for detecting and evaluating environmental status and change by coordinating these analyses with ongoing in-situ monitoring and research efforts. In this effort it is essential to ensure full utilization of the data standards being developed for map and remotely sensed data by the Federal Geographic Data Committee. MTPE seeks scientific data and information from existing or to be developed commercial systems that enhances research on understanding the status and trends related to U.S. ecosystems. The emphasis in this activity is on increasing the use of remote sensing information in integrated assessments which document status and trends of multiple resources and related environmental and socioeconomic conditions in both managed and unmanaged ecosystems. The data will also be used to relate status and trends to human and natural causes and consequences, to predict future trajectories and rates of change, and to identify research needed to reduce uncertainties in current observations and projections. MTPE seeks proposals that document the spatial and spectral characteristics of all past, present, and known future

remote sensing imagery for specific environments. This product could take the form of an atlas of imagery with multiple types of imagery illustrated and explained for specific locations and environments (e.g., agriculture, forests, wetland, urban, etc.). The atlas will serve to demonstrate the information which can be derived from remote sensing imagery for any future national environmental monitoring system.

4. Support the design of a prototype environmental report on trends in, and the status of, the U.S. environment.

The Vice President issued a challenge to the scientific community in September 1996, to develop an environmental report card on the status, trends, and health of the Nation's environment and natural resources. The environmental report card will require unique, new integrative indicators of the sustainability of the resource base that supports the economic and human welfare of the U.S. MTPE seeks scientific data and information which can be used in the design of an assessment of the state of the Nation's environment and natural resources. The information should address major issues like land cover and land use change, water resources, air resources, and trends in resource and ecosystem productivity. It is expected that the ultimate environmental report card will illustrate how climatic, economic, and other forces of change relate to environmental status and trends. This design of a report card requires a variety of experimental products for assessment by scientists, policy makers, and members of the public. Emphasis is placed on the development of sustainability indicators which are easily understood by a broad audience.

5. Improve methods for the sustainable management of farmlands, forests, rangelands, and coastal marine resources.

MTPE seeks scientific information to enhance research on new and improved methods for the sustainable management of natural resources. The primary focus of the research is in two areas: (1) Reducing inputs of energy and materials to managed environments while maintaining or increasing net ecosystem productivity (e.g., high precision agriculture). (2) Early detection and characterization of stress on a managed ecosystem, which could reduce net ecosystem productivity if the stress were not removed (e.g., overgrazing of croplands, ozone stress on crops, droughts, etc.). This information should provide the basis for new insights and knowledge into the sustainable management of natural resources, and not duplicate methods and practices already available through the commercial sector. The data provider must clearly specify how the products provided contribute to the above mentioned goals of increasing the efficiency of natural resource management prances. Data products should uniquely improve spatial and temporal sampling of the environment, or combine in situ and existing remote sensing data using innovative data fusion techniques.

SCIENCE AREA: Seasonal-to-Interannual Climate Variability and Prediction

MTPE has defined a focused research effort to observe, understand, and predict weather and climate variations that occur on time scales of seasons to a year. Variations in the upper ocean circulation and sea surface temperatures, sea ice, atmospheric circulation including the hydrologic cycle, atmospheric turbidity, and land surface conditions are hypothesized to be mutually interactive and to generate significant weather and climate variability. Scientists associated with the MTPE and USGCRP programs are determining which elements of this variability are predictable if relevant initial and boundary conditions are sufficiently well known. Such an improved understanding has potentially large socioeconomic benefit. The following scientific information is required to complement and supplement the current research effort on seasonal-to-interannual climate variability and prediction:

6. Measure globally distributed atmospheric wind profiles.

MTPE seeks direct global measurements of atmospheric wind profiles at 2 m/s or better precision. The primary purpose of the measurements is to improve capabilities for prediction. Proposals to provide wind data should include a detailed rationale for the geophysical characteristics of the data. The spatial and temporal coverage, and the accuracy and precision of the data, should be justified in terms of expected improvements in prediction of seasonal-to- interannual climate variability. The data provided should be in a format suitable for incorporation into the NASA and NOAA data assimilation models.

7. Provide measurements from Global Positioning System (GPS) satellites for weather and climate prediction.

MTPE seeks measurements of atmospheric variables obtained by GPS on low-Earth orbiting satellites. The data will be used to specifically test applications to weather and climate forecasting. The data should be derived from a satellite constellation capable of global sampling in a manner appropriate to a rigorous test of whether the measurements from GPS improve forecasting skill. The data stream must be provided in a form appropriate for assimilation into current state-of-the-art weather forecasting models.

SCIENCE AREA: Natural Hazards Research and Applications

Thousands of human lives and billions of dollars are lost each year to natural disasters. While natural hazards are inevitable manifestations of Earth processes, they need not inevitably result in disasters.

NASA can assist society in reducing loss of life, casualties and property and reducing social and economic disruptions from future natural disasters. Through the development of technologies designed to observe and understand the Earth the Agency possesses a remarkable inventory of tools which can be effectively developed

and applied to understanding natural hazards, characterizing natural disasters, and monitoring conditions that may lead to such events.

8. Improve methods and understanding of how best to characterize and mitigate the consequences of natural hazards for both managed and natural ecosystems.

MTPE seeks scientific data products which enhance research on the consequences of natural hazards for the sustainability of natural resources and economic development. This area of research is focused primarily on scientific issues related to the long-term consequences and management of natural hazards, and not on crisis management. For example, how can remote sensing data be integrated with demographic, socioeconomic, and in situ environmental data to improve assessments of the sensitivity and vulnerability of an area or region to extreme weather events, earthquakes, volcanic eruptions, and other natural hazards? An understanding of the environmental, social, and economic factors that render individuals, communities, and economic sectors of the U.S. more or less vulnerable to weather and climatic fluctuations is especially critical for developing strategies for sustainable economic progress. In this area MTPE also seeks scientific data which will enhance research on and understanding of the sensitivity and vulnerability of human activities to seasonal-to-interannual climate variability. Scientific information is most needed for areas and regions at greatest risk. MTPE also has a special interest in unique, new sources of high resolution remotely sensed data which can be evaluated in pilot studies related to natural hazards research. The data provider must clearly specify how the products provided will contribute to research on new and improved capabilities for characterizing and mitigating the consequences of natural hazards.

SCIENCE AREA: Long-Term Climate: Natural Variability and Change Research

Long term climate variability encompasses changes of regional-to-global scale climate, both natural and human induced, that occur over periods longer than a few years. NASA's objective is to make key contributions to a wider interdisciplinary effort involving other U.S. agencies and institutions, as well as other countries. This larger effort addresses the broad scientific agenda of the U.S. Global Change Research Program (USGCRP) at the national level, and the World Climate Research Program (WCRP), the International Geosphere-Biosphere Program (IGBP) and the Intergovernmental Panel on Climate Change (IPCC) at the international level.

Accordingly, NASA Mission to Planet Earth (MTPE) research objectives associated with the climate issue require long-term data sets that:

(a) Characterize and document long-term climate variability and trends through systematic global observations of the climate system and its external forcing;

(b) Understand the nature of key climate-forming and regulating parameters, and to identify the causal factors of observed climate variations and feedback processes that govern the response of the climate system; and

(c) Assess the predictable aspects of long-term climate variability and changes, including regional impacts, through the combined application of observation and global models.

9. Test the utility of new measurements that meet the continuity requirements of the EOS science team

The following table lists measurements and associated instruments for the current EOS science missions. The information based on EOS Level 1 requirements and other MTPE studies.

References:

EOS Program Office, Earth Observing System (EOS) Program - Level 1 Requirements, NASA Headquarters, 10 December 1991.

EOS Project Office, Execution Phase Project Plan for Earth Observing System (EOS), GSFC 170-01-01, NASA Goddard Space Flight Center, September 1993.

EOS Measurement Sets

Measurement	Instruments	Satellites
Cloud Properties (amount, optical properties, height)	MODIS, GLAS, AMSR, MISR, AIRS, ASTER, EOSP, SAGE III	EOS AM-1, EOS PM-1, EOS AM-2, EOS Laser ALT-1, Meteor 3M-1, ISSA, ADEOS II, FOO/SAGE III
Radiative Energy Fluxes (top of atmosphere, surface)	CERES, ACRIM, MODIS, GLAS, MISR, AIRS, ASTER, SAGE III	EOS AM-1, EOS AM-2, EOS PM-1, EOS PM-2, EOS ACRIMSAT, EOS Laser ALT-1, ISSA, Meteor 3M-1, FOO/SAGE III, TRMM
Precipitation	AMSR	ADEOS II
Tropospheric Chemistry (ozone, precursor gases)	TES, MOPITT, SAGE III, MLS, HIRDLS, LIS	Meteor 3M-1, EOS CHEM-1, TRMM, FOO/SAGE III, EOS AM-1, EOS CHEM-1
Stratospheric Chemistry (ozone, ClO, BrO, OH, trace gasses)	MLS, HIRDLS, SAGE III, ODUS, TES	EOS CHEM-1, FOO/SAGE III, Meteor 3M-1
Aerosol Properties	SAGE III, HIRDLS,	Meteor 3M-1, FOO/SAGE III, EOS

(stratospheric, tropospheric)	MODIS, MISR, EOSP,GLAS	CHEM-1,EOS AM-1, EOS AM-2, EOS PM-1, EOS PM-2, EOS Laser ALT-1
Atmospheric Temperature	AIRS/AMSU, MLS, HIRDLS, TES, MODIS	EOS PM-1, EOS PM-2, NOAA-K, NOAA-L, NOAA-N, EOS CHEM-1, EOS AM-1, EOS AM-2, EOS CHEM-1
Atmospheric Humidity	AIRS/AMSU/HSB, MLS, SAGE III, HIRDLS, DFA/MR, MODIS, TES	EOS PM-1, EOS PM-2, NOAA-K, NOAA-L, NOAA-N, Meteor 3M-1, FOO/SAGE III, EOS CHEM-1, EOS AM-1, EOS AM-2, Radar ALT-2, Jason-1
Lightning (events, area, flash structure)	LIS	TRMM
Total Solar Irradiance	ACRIM	EOS ACRIMSAT
Ultraviolet Spectral Irradiance	SOLSTICE	FOO/SOLSTICE
Land-Cover and Land-Use Change	ETM+/LATI, MODIS, ASTER, MISR	Landsat-7, EOS AM-2, EOS AM-1, EOS PM-1, EOS PM-2
Vegetation Dynamics	MODIS, MISR, AIRS, ETM+	EOS AM-1, EOS AM-2, EOS PM-1, EOS PM-2, Landsat-7
Land Surface Temperature	ASTER, MODIS, AIRS, ETM+	EOS AM-1, EOS AM-2, EOS PM-1, EOS PM-2, Landsat-7
Fire Occurrence (extent, thermal anomalies)	MODIS, ASTER, ETM+	EOS AM-1, EOS AM-2, EOS PM-1, EOS PM-2, Landsat-7
Volcanic Effects (frequency of occurrence, thermal anomalies, impact)	MODIS, ASTER, ETM+, MISR	EOS AM-1, EOS AM-2, EOS PM-1, EOS PM-2, Landsat-7
Land Surface Wetness	AMSR	ADEOS-II
Sea Surface Temperature	MODIS, AIRS, AMSR	EOS AM-1, EOS AM-2, EOS PM-1, EOS PM-2, ADEOS-II
Phytoplankton and Dissolved Organic Matter	MODIS	EOS AM-1, EOS AM-2, EOS PM-1, EOS PM-2

Surface Wind Fields	SeaWinds, AMSR, DFA/MR	ADEOS-II, Radar ALT-2, Jason-1
Ocean Surface Topography (height, waves, sea level)	DFA/MR	Radar ALT-2, Jason-1
Land Ice (ice sheet topography, ice sheet volume change, glacier change)	GLAS, ASTER, ETM+/LATI	EOS Laser ALT-1, EOS AM-1, Landsat-7, EOS AM-2
Sea Ice (extent, concentration, motion, temperature)	AMSR, DFA/MR, MODIS, ETM+/LATI, ASTER	ADEOS-II, EOS AM-1, EOS AM-2, EOS PM-1, EOS PM-2, Landsat-7, Radar, ALT-2, Jason-1
Snow Cover (extent, water equivalent)	MODIS, AMSR, ASTER, ETM+/LATI	ADEOS-II, EOS AM-1, EOS AM-2, EOS PM-1, EOS PM-2, Landsat-7

Appendix B

EOSDIS Data Formats

MTPE Scientific Data Buy participants are required to make their products and data services available to the broader Earth science community via the EOSDIS Core System (ECS) Advertising Service. The Advertising Service will enable users to locate data, information, and services both internal and external to EOSDIS. Participants will populate the ECS Advertising Service with appropriate information on their instrument and data products, and provide pointers to their World Wide Web (WWW) page or other client interface for search and access. Documentation on "advertising" data and services via ECS is provided in the ECS technical paper, "442 TP-001-001 External Data Provider Options," at http://edhs1.gsfc.nasa.gov.

Data and Metadata Standards

To facilitate access to MTPE data by the Earth science community, it is recommended that data products in the HDF-EOS (hierarchical data format) standard data format and that they generate and store metadata describing their data products that conforms to the intermediate level of the ECS Metadata Standard. Information on HDF-EOS and the ECS Metadata Standard is provided below. If a data provider proposes to use other methods or standards for data products and metadata, then cost savings and rationale should be provided, and the conversion of data from the chosen format(s) to HDF (for transition to long term archives) must be included in the cost proposal.

The production of data in the HDF-EOS standard data format will provide the capability to use public domain and commercial data analysis and data management tools and provide the highest level of service (e.g., subsetting, subsampling) for data sets when they are migrated to EOSDIS. The HDF-EOS Primer, HDF-EOS Specification, and HDF-EOS Application Program Interfaces may be located via the WWW at http://eos.nasa.gov/esdis/InfoArch. Software for producing HDF-EOS data, serving HDF-EOS data on the WWW, and visualizing HDF-EOS data is also referenced at this Web page.

Adherence to the intermediate level of the ECS Metadata standard will result in the creation of directory, inventory and guide level information compatible with EOSDIS Version 0 data standards and facilitate future interoperability with EOSDIS Version 0 and future ECS-based versions.

The ECS "DID 311, SDPS Database Design and Database Schema Specifications for the ECS, Appendix B, Mandatory Metadata" may be located via the WWW at http://eos.nasa.gov/esdis/InfoArch. Software supporting this standard is also described at this site.

Systems and Software Available for Data Providers

In addition to software which supports the standards described in the preceding paragraphs, EOSDIS Core System software for science data archiving, production, distribution, and access will be available for reuse.

A white paper describing the available systems and software, titled "ECS Support for Federated Systems," is available via the WWW at http://edhs1.gsfc.nasa.gov. References on External Data Provider interfaces to ECS will be documented in "819-RD-001-001, ECS Application Programming Interface (API) Interface Definition Document (IDD)", which will be available on or about August 30, 1996, via the WWW at http://edhs1.gsfc.nasa.gov.

Offerors can propose to use EOSDIS software and interfaces, which will be provided at no cost, to meet these interfaces. Offerors, however, must include the cost of required software licenses and hardware in their data set or product pricing.

ATTACHMENT NO. 3 - OFFEROR REPRESENTATIONS AND CERTIFICATIONS

1. 52.212-3 OFFEROR REPRESENTATIONS AND CERTIFICATIONS COMMERCIAL ITEMS (JUN 1996)

FAR 52.212-3, OFFEROR REPRESENTATIONS AND CERTIFICATIONS-COMMERCIAL ITEMS (FAR Clause 52.212-3) (JUN 1996), are set forth in full text below. Offeror must include a completed copy of this provision with its offer. These representations and certifications will be incorporated by reference into the resultant contract. Offeror must identify the city and state where the item is manufactured or where the work is performed.

(a) Definitions as used in this Provision:

Emerging small business means a small business concern whose size is no greater than 50 percent of the numerical size standard for the standard industrial classification code designated.

Small business concern means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria in 13 CFR Part 121 and size standards in this solicitation.

Small disadvantaged business concern means a small business concern that--

(1) Is at least 51 percent unconditionally owned by one or more individuals who are both socially and economically disadvantaged, or a publicly owned business, having at least 51 percent of its stock unconditionally owned by one or more socially and economically disadvantaged individuals, and

(2) Has its management and daily business controlled by one or more such individuals. This term also means a small business concern that is at least 51 percent unconditionally owned by an economically disadvantaged Indian tribe or Native Hawaiian organization, or a publicly owned business having at least 51 percent of its stock unconditionally owned by one or more of these entities, which has its management and daily business controlled by members of an economically disadvantaged Indian tribe or Native Hawaiian organization and which meets the requirements of 13 CFR Part 124.

Women-owned small business concern means a small business concern--

(1) Which is at least 51 percent owned by one or more women or, in the case of any publicly owned business, at least 51 per cent of the stock of which is owned by one or more women; and

(2) Whose management and daily business operations are controlled by one or more women.

Women-owned business concern means a concern which is at least 51 percent owned by one or more women; or in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more women; and whose management and daily business operations are controlled by one or more women.

(b) Taxpayer Identification Number (TIN) (26 U.S.C. 6050M)

(1) Taxpayer Identification Number (TIN)

___ TIN: _____.

___ TIN has been applied for.

___ TIN is not required because:

___ Offeror is a nonresident alien, foreign corporation, or foreign partnership that does not have income effectively connected with the conduct of a trade or business in the U.S. and does not have an office or place of business or a fiscal paying agent in the U.S.;

___ Offeror is an agency or instrumentality of a foreign government;

___ Offeror is an agency or instrumentality of a Federal, state, or local government;

___ Other. State basis. _____

(2) Corporate Status

___ Corporation providing medical and health care services, or engaged in the billing and collecting of payments for such services;

___ Other corporate entity;

___ Not a corporate entity:

___ Sole proprietorship

___ Partnership

___ Hospital or extended care facility described in 26 CFR 501(c)(3) that is exempt from taxation under 26 CFR 501(a).

(3) Common Parent

___ Offeror is not owned or controlled by a common parent.

Name and TIN of common parent:

___ Name _____.

___ TIN _____.

(c) Offeror Representations

Offerors must complete the following representations when the resulting contract is to be performed inside the United States, its territories or possessions, Puerto Rico, the Trust Territory of the Pacific Islands, or the District of Columbia. Check all that apply.

(1) Small business concern. The offeror represents as part of its offer that it (†††) is, (†††) is not a small business concern.

(2) Small disadvantaged business concern. The offeror represents and certifies that it (†††) is, (†††) is not a small disadvantaged business concern.

(3) Women-owned small business concern. The offeror represents that it (†††) is, (†††) is not a women-owned small business concern.

Note: Complete paragraphs (c)(4) and (c)(5) only if this solicitation is expected to exceed the simplified acquisition threshold ($100,000).

(4) Women-owned business concern. The offeror represents that it (†††) is, (†††) is not, a women-owned business concern.

(5) Tie bid priority for labor surplus area concerns. If this is an invitation for bid, small business offerors may identify the labor surplus areas in which costs to be incurred on account of manufacturing or production (by offeror or first-tier subcontractors) amount to more than 50 percent of the contract price:

_____

(6) Small Business Size for the Small Business Competitiveness Demonstration Program and for the Targeted Industry Categories under the Small Business Competitiveness Demonstration Program. [Complete only if the offeror has certified itself to be a small business concern under the size standards for this solicitation.]

(i) (Complete only for solicitations indicated in an addendum as being set-aside for emerging small businesses in one of the four designated industry groups (DIGs)). The offeror represents as part of its offer that it (†††) is, (†††) is not an emerging small business.

(ii) (Complete only for solicitations indicated in an addendum as being for one of the targeted industry categories (TICs) or four DIGs. Offeror represents and certifies as follows:

(A) Offeror's number of employees for the past 12 months (check the Employees column if size standard stated in the solicitation is expressed in terms of number of employees); or

(B) Offeror's average annual gross revenue for the last 3 fiscal years (check the Average Annual Gross Number of Revenues column if size standard stated in the solicitation is expressed in terms of annual receipts).

Check one item:

Number of Employees	Average Annual Gross Revenues
___ 50 or fewer	_____ $1 million
___ 51-100	_____ $1,000,001 - $2 million
___ 101-250	_____ $2,000,001 - $3.5 million
___ 251-500	_____ $3,500,001 - $5 million
___ 501-750	_____ $5,000,001 - $10 million
___ 751-1,000	_____ $10,000,001 - $17 million
___ Over 1,000	_____ Over $17 million

(d) Certifications and representations required to implement provisions of Executive Order 11246

(1) Certification of non-segregated facilities

(Applies only if the contract amount is expected to exceed $10,000.) By submission of this offer, the offeror certifies that it does not and will not maintain or provide for its employees, any facilities that are segregated on the basis of race, color, religion, or national origin because of habit, local custom, or otherwise and that it does not and will not permit its employees to perform their services at any location where segregated facilities are maintained. The offeror agrees that a breach of this certification is a violation of the Equal Opportunity clause in the contract.

(2) Previous Contracts and Compliance

The offeror represents that--

(i) It (†††) has, (†††) has not, participated in a previous contract or subcontract subject either to the Equal Opportunity clause of this solicitation, the clause originally contained in Section 310 of Executive Order 10925, or the clause contained in Section 201 of Executive Order 11114; and

(ii) It (†††) has, (†††) has not, filed all required compliance reports.

(3) Affirmative Action Compliance

The offeror represents that--

(i) It (†††) has developed and has on file, (†††) has not developed and does not have on file, at each establishment, affirmative action programs required by rules and regulations of the Secretary of Labor (41 CFR Subparts 60-1 and 60-2), or

(ii) It (†††) has not previously had contracts subject to the written affirmative action programs requirement of the rules and regulations of the Secretary of Labor.

(e) Certification Regarding Payments to Influence Federal Transactions (31 U.S.C. 1352)

(Applies only if the contract is expected to exceed $100,000.) By submission of its offer, the offeror certifies to the best of its knowledge and belief that no Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress or an employee of a Member of Congress on his or her behalf in connection with the award of any resultant contract.

(f) Buy American Act--Trade Agreements--Balance of Payments Program Certificate. (Applies only if FAR clause 52.225-9 , ìBuy American Act--Trade Agreement--Balance of Payments Programî, is included in this solicitation.)

(1) The offeror hereby certifies that each end product, except those listed in paragraph (f)(2) of this provision, is a domestic end product (as defined in the clause entitled ìBuy American Act--Trade Agreements Balance of Payments Programî) and that components of unknown origin have been considered to have been mined, produced, or manufactured outside the United States, a designated country, a North American Free Trade Agreement (NAFTA) country, or a Caribbean Basin country, as defined in section 25.401 of the Federal Acquisition Regulation.

(2) Excluded End Products:

Line item No.	Country of origin
_____	_____
_____	_____

(List as necessary)

(3) Offers will be evaluated by giving certain preferences to domestic end products, designated country end products, NAFTA country end products, and Caribbean Basin country end products over other end products. In order to obtain these preferences in the evaluation of each excluded end product listed in paragraph (f)(2) of this provision, offerors must identify and certify below those excluded end products that are designated or NAFTA country end products, or Caribbean Basin country end products. Products that are not identified and certified below will not be deemed designated country end products, NAFTA country end products, or Caribbean Basin country end

products. Offerors must certify by inserting the applicable line item numbers in the following:

(i) The offeror certifies that the following supplies qualify as Designated or NAFTA country end products as those terms are defined in the clause entitled Buy American Act--Trade Agreements--Balance of Payments Program:

_____

(Insert line item numbers)

(ii) The offeror certifies that the following supplies qualify as Caribbean Basin country end products as that term is defined in the clause entitled Buy American Act--Trade Agreements--Balance of Payments Program:

_____

(Insert line item numbers)

(4) Offers will be evaluated in accordance with FAR Part 25.

(g) (1) Buy American Act--North American Free Trade Agreement Implementation Act--Balance of Payments Program.

(Applies only if FAR clause 52.225-21, Buy American Act--North American Free Trade Agreement Implementation Act--Balance of Payments Program, is included in this solicitation.)

(i) The offeror certifies that each end product being offered, except those listed in paragraph (g)(1)(ii) of this provision, is a domestic end product (as defined in the clause entitled ìBuy American Act--North American Free Trade Agreement Implementation Act-Balance of Payments Program."), and that components of unknown origin have been considered to have been mined, produced, or manufactured outside the United States.

(ii) Excluded End Products:

Line item No. Country of origin

_____ _____

(List as necessary)

(iii) Offers will be evaluated by giving certain preferences to domestic end products or NAFTA country end products over other end products. In order to obtain these preferences in the evaluation of each excluded end product listed in paragraph (g)(1)(ii) of this provision, offerors must

identify and certify below those excluded end products that are NAFTA country end products. Products that are not identified and certified below will not be deemed NAFTA country end products.

The offeror certifies that the following supplies qualify as ìNAFTA country end productsî as that term is defined in the clause entitled ìBuy American Act--North American Free Trade Agreement Implementation Act--Balance of Payments Programî:

_____

_____

_____

(Insert line item numbers)

(iv) Offers will be evaluated in accordance with FAR Part 25 of the Federal Acquisition Regulations. In addition, if the solicitation is for supplies for use outside of the United States, an evaluation factor of 50 percent will be applied to offers of end products that are not domestic or NAFTA country end products.

(2) *Alternate I*. If Alternate I to the clause at 52.225-21 is included in this solicitation, substitute the following paragraph (g)(1)(iii) for paragraph (g)(1)(iii) of this provision:

(g)(1)(iii)(iii) Offers will be evaluated by giving certain preferences to domestic end products or Canadian end products over other end products. In order to obtain these preferences in the evaluation of each excluded end product listed in paragraph (b) of this provision, offerors must identify below those excluded end products that are Canadian end products. Products that are not identified below will not be deemed Canadian end products.

The following supplies qualify as Canadian end products as that term is defined in the clause entitled ìBuy American Act--North American Free Trade Agreement Implementation Act--Balance of Payments Programî:

_____

(Insert line item numbers)

(h) Certification Regarding Debarment, Suspension or Ineligibility for Award (Executive Order 12549)

The offeror certifies, to the best of its knowledge and belief, that--

(1) The offeror and/or any of its principals (†††) are, (†††) are not presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any Federal agency, and

(2) (†††) Have, (†††) have not, within a three-year period preceding this offer, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a Federal, state or local government contract or subcontract; violation of Federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, or receiving stolen property; and ( ) are, ( ) are not presently indicted for, or otherwise criminally or civilly charged by a Government entity with, commission of any of these offenses.

ADDENDUM NO. 1- INSTRUCTIONS TO OFFERORS

1. Instructions to Offerors - Commercial Items (FAR Clause 52.212-1) (OCT 1995)

The following provision is incorporated as an addendum to item (c) "Period for acceptance of offers" of FAR Clause 52.212-1: The offeror agrees to hold the price in its offer firm for 60 calendar days from the date specified for receipt of offer. Also note that in accordance with FAR 52.212-1(e), offerors are encouraged to submit multiple offers presenting alternative terms and conditions or commercial items satisfying the requirements of this solicitation. Each offer submitted will be evaluated separately

2. Data Distribution

The offers submitted in response to this RFO must identify clearly the scientific area and questions being addressed and must provide a clear explanation of the relevance of the proposed effort in the context of the identified research area and questions. The data sets provided in response to this solicitation should be in a format conducive to low-cost distribution to a broad community of users and compatible with the EOS Data and Information System (EOSDIS). The formatting requirements for EOSDIS are given in Appendix B. All information should be georeferenced and presented in a geospatial format in accordance with guidelines established by the Federal Geographic Data Committee. Data sets must be provided with complete metadata that can be used as a catalog for potential users. The full underlying data from which any products are derived must be provided to NASA in a format suitable for archival in the EOSDIS. Materials provided in CD-ROM format must be ISO-9660 compatible and readable on PC, Macintosh, and UNIX systems.

The offeror may, at its discretion, propose alternative data distribution methods for consideration. All alternatives should be included in the price quotation for the data set or product purchases.

3. Intellectual Property Rights: Data and Data Products

As part of the phase I offers, the data provider will discuss the data rights provisions of the associated data set or product being offered. This solicitation is consistent with NASA's recently published MTPE Commercial Strategy as outlined in the following sections.

3.1 Data Sets

Licensing and other intellectual property rights to data purchased by the U.S. Government under this RFO will be established subject to mutually agreeable terms with the data vendors. It is NASA's desire to purchase data sets under the following conditions:

- In general, NASA will reserve the right to distribute data to researchers affiliated with MTPE through grants or other formal mechanisms, and to researchers in the international community with whom NASA has data exchange arrangements.

- NASA will not commercially exploit property in which the U.S. Government holds a license.
- MTPE data products derived from purchased data sets will have no restrictions on access by and distribution to the science community outside the MTPE program.

Data providers seeking alternative approaches to data rights are encouraged to define these alternatives in their proposals.

3.2 Data Provider

Use by NASA of data products purchased by or licensed to the U.S. Government under this RFO will be established subject to mutually agreeable terms with the data product provider. It is NASA's desire to purchase data sets under the following conditions:

- In general, NASA will reserve the right to distribute data products to researchers affiliated with MTPE through grants or other formal documented mechanisms, and to researchers in the international community with whom NASA has data exchange arrangements.
- NASA will respect copyright protection associated with data products and will not commercially exploit property in which the U.S. Government holds a license.
- If the data products embody other commercial data, products, software, or other commercial services, the offeror must indicate the mechanism by which their use transfers to NASA.

Data providers seeking alternative approaches to data products are encouraged to define these alternatives in their proposals

4. Validation Plan

For each proposal, the data provider must submit a validation plan for its specific data set(s) or product(s). Under phase I of the data purchase RFO process, the validation plan for each data set will be evaluated. Evaluation will be based in part upon the techniques outlined in the offer as compared with state-of-the-practice and state-of-the-art validation techniques.

The validation plan will be developed by the data provider and must address the manner in which data sets will be evaluated by the data provider to maintain advertised specifications and quality. The plan will contain the projected data characteristics and performance specifications. Validation parameters will be an important element of the offer for providing data and data products. All validation plans submitted will be evaluated by Stennis Space Center (SSC) with support from the data provider and the MTPE science team. For land use/land cover type data sets, data providers will be allowed access to the SSC validation site and verification network for testing their data sets. Use of the SSC validation site must comply with the guidelines set forth in the National Verification Site Initiative, Stennis Space Center.

It is essential that data quality be maintained throughout the life of the contract. Those providing data under the second phase of the data purchase will be required to furnish a Quality Assurance/Quality Control plan detailing how data quality will be maintained

throughout the life of the contract. In addition, Stennis Space Center will re-validate the phase II data sets or products against the data-provider-developed validation plan to benchmark the quality of the data. If the data or data products are found to be of insufficient quality or do not meet the specifications as outlined in the quality assurance plan, that data or data product will be deemed unacceptable under the contract and will not be accepted or paid for by NASA.

5. Proposal Format

The proposals offered in response to this RFO will be submitted according to the format described below. Proposals (including appendices) should not exceed 20 pages for phase I, should be in 12-point type, and should be submitted to the NASA/SSC Procurement Office. Proposals must be signed by an official of the company and/or corporation authorized to certify management and financial aspects of the proposed contract. Proposals should be sent to the following address:

MTPE Scientific Data Buy Proposal
C/O: Rebecca Dubuisson /DA30 - Contracting Officer
NASA John C. Stennis Space Center
Bldg. 1100, Room 255L
SSC, MS 39529-6000

6. Proposal Content

All phase I proposals shall contain the following information

1) A complete description of the proposed data set and the science research theme(s) it will address
2) A price quotation for prototypical data sets for the evaluation phase of the process
3) A complete data validation plan
4) Proposed arrangements for data rights
5) A data delivery plan
6) Point(s) of contact
7) An estimate of the price of the final product including both the price per data set or per time period and, if applicable, the minimum required purchase value.

Table 2 describes the format for phase I of the proposal.

Table 2. Phase I Proposal Format.

Item	Content	RFO Section	Suggested Page Limit
1	Cover Letter	n/a	n/a
2	Title Page	n/a	1
3	Executive Summary	n/a	1
4	Table of Contents	n/a	n/a
5	Introduction	n/a	1
6	Science Research Theme Addressed	5.0	5
7	Data Description	5.0	5
8	Data Validation Plan	7.0	2
9	Data Distribution Plan	11.0	1
10	Prototypical Data Prices and Estimated Data Prices	12.0	1
11	Data Policy/Rights	8.0	1
12	Contact Personnel	n/a	1

The data provider should follow the general format specified above. The suggested page limits are only estimates based upon the amount of space certain portions of the proposal may require. If the data provider deems that less or more space is necessary for a portion of the proposal, the data provider may develop the content as required, as long as the entire proposal does not exceed the 20-page limit for a single data set or product offering. As indicated in the RFO, multiple data sets or products may be offered under one proposal. Additional pages for each offered product may be used as long the suggested page limit is not exceeded for each required section. The offeror can duplicate sections 6, 7, 8, 9, l0 and ll, as necessary to describe the products offered.

ADDENDUM NO. 2 - ADDITIONAL FAR/NFS PROVISIONS

A firm fixed-price commercial item contract will be awarded in accordance with Federal Acquisition Regulations (FAR) Subpart 12, as supplemented by the NASA Midrange Pilot Test Program approved by the Office of Federal Procurement Policy on April 16, 1993.

1. DESIRED AND REQUIRED TIME OF DELIVERY (52.211-9) (JUL 1995)

The Government desires delivery to be made according to the following delivery schedule:

DESIRED DELIVERY SCHEDULE		
ITEM NO.	QUANTITY	WITHIN CALENDAR DAYS AFTER DATE OF CONTRACT AWARD
1		180

If the offeror is unable to meet the desired delivery schedule, it may, without prejudicing evaluation of its offer, propose a delivery schedule below. However, the offeror's delivery proposed delivery schedule must not extend the delivery period beyond the time for delivery in the Government's required delivery schedule as follows:

REQUIRED DELIVERY SCHEDULE		
ITEM NO.	QUANTITY	WITHIN CALENDAR DAYS AFTER DATE OF CONTRACT AWARD
1		180

Offerors that propose delivery of a quantity under such terms or conditions that delivery will not clearly fall within the applicable required delivery period specified above, may be rejected. If the offeror proposes no other delivery schedule, the desired delivery schedule above will apply.

OFFERORíS PROPOSED DELIVERY SCHEDULE		
ITEM NO.	QUANTITY	WITHIN CALENDAR DAYS AFTER DATE OF CONTRACT AWARD
1		

2. MANDATORY INFORMATION FOR ELECTRONIC FUNDS TRANSFER PAYMENT 52.232-33 (AUG 1996)

(a) Method of payment. Payments by the Government under this contract, including invoice and contract financing payments, may be made by check or electronic funds transfer (EFT) at the option of the Government. If payment is made by EFT, the Government may, at its option, also forward the associated payment information by electronic transfer. As used in this clause, the term "EFT" refers to the funds transfer and may also include the information transfer.

(b) Mandatory submission of Contractor's EFT information.

(1) The Contractor is required, as a condition to any payment under this contract, to provide the Government with the information required to make payment by EFT as described in paragraph (d) of this clause, unless the payment office determines that submission of the information is not required. However, until January 1, 1999, in the event the Contractor certifies in writing to the payment office that the Contractor does not have an account with a financial institution or an authorized payment agent, payment shall be made by other than EFT. For any payments to be made after January 1, 1999, the Contractor shall provide EFT information as described in paragraph (d) of this clause.

(2) If the Contractor provides EFT information applicable to multiple contracts, the Contractor shall specifically state the applicability of this EFT information in terms acceptable to the payment office.

(c) Contractor's EFT information. Prior to submission of the first request for payment (whether for invoice or contract financing payment) under this contract, the Contractor shall provide the information required to make contract payment by EFT, as described in paragraph (d) of this clause, directly to the Government payment office named in this contract. If more than one payment office is named for the contract, the Contractor shall provide a separate notice to each office. In the event that the EFT information changes, the Contractor shall be responsible for providing the changed information to the designated payment office(s).

(d) Required EFT information. The Government may make payment by EFT through either an Automated Clearing House (ACH) subject to the banking laws of the United States or the Federal Reserve Wire Transfer System at the Government's

option. The Contractor shall provide the following information for both methods in a form acceptable to the designated payment office. The Contractor may supply this data for this or multiple contracts (see paragraph (b) of this clause).

(1) The contract number to which this notice applies.

(2) The Contractor's name and remittance address, as stated in the contract, and account number at the Contractor's financial agent.

(3) The signature (manual or electronic, as appropriate), title, and telephone number of the Contractor official authorized to provide this information.

(4) For ACH payments only:

(i) Name, address, and 9-digit Routing Transit Number of the Contractor's financial agent.

(ii) Contractor's account number and the type of account (checking, saving, or lockbox).

(5) For Federal Reserve Wire Transfer System payments only:

(i) Name, address, telegraphic abbreviation, and the 9-digit Routing Transit Number for the Contractor's financial agent.

(ii) If the Contractor's financial agent is not directly on-line to the Federal Reserve Wire Transfer System and, therefore, not the receiver of the wire transfer payment, the Contractor shall also provide the name, address, and 9-digit Routing Transit Number of the correspondent financial institution receiving the wire transfer payment.

(e) Suspension of payment.

(1) Notwithstanding the provisions of any other clause of this contract, the Government is not required to make any payment under this contract until after receipt, by the designated payment office, of the correct EFT payment information from the Contractor or a certificate submitted in accordance with paragraph (b) of this clause. Until receipt of the correct EFT information, any invoice or contract financing request shall be deemed not to be a valid invoice or contract financing request as defined in the Prompt Payment clause of this contract.

(2) If the EFT information changes after submission of correct EFT information, the Government shall begin using the changed EFT information no later than the 30th day after its receipt to the extent payment is made by EFT. However, the Contractor may request that no further payments be made until the changed EFT information is implemented by the payment office. If such suspension would result in a late payment under the Prompt Payment clause of this contract, the Contractor's request for suspension shall extend the due date for payment by the number of days of the suspension.

(f) Contractor EFT arrangements. The Contractor shall designate a single financial agent capable of receiving and processing the electronic funds transfer using the

EFT methods described in paragraph (d) of this clause. The Contractor shall pay all fees and charges for receipt and processing of transfers.

(g) Liability for uncompleted or erroneous transfers.

(1) If an uncompleted or erroneous transfer occurs because the Government failed to use the Contractor-provided EFT information in the correct manner, the Government remains responsible for (i) making a correct payment, (ii) paying any prompt payment penalty due, and (iii) recovering any erroneously directed funds.

(2) If an uncompleted or erroneous transfer occurs because Contractor-provided EFT information was incorrect at the time of Government release of the EFT payment transaction instruction to the Federal Reserve System, and--

(i) If the funds are no longer under the control of the payment office, the Government is deemed to have made payment and the Contractor is responsible for recovery of any erroneously directed funds; or

(ii) If the funds remain under the control of the payment office, the Government retains the right to either make payment by mail or suspend the payment in accordance with paragraph (e) of this clause.

(h) EFT and prompt payment.

(1) A payment shall be deemed to have been made in a timely manner in accordance with the Prompt Payment clause of this contract if, in the EFT payment transaction instruction given to the Federal Reserve System, the date specified for settlement of the payment is on or before the prompt payment due date, provided the specified payment date is a valid date under the rules of the Federal Reserve System.

(2) When payment cannot be made by EFT because of incorrect EFT information provided by the Contractor, no interest penalty is due after the date of the uncompleted or erroneous payment transaction, provided that notice of the defective EFT information is issued to the Contractor within 7 days after the Government is notified of the defective EFT information.

(i) EFT and assignment of claims. If the Contractor assigns the proceeds of this contract as provided for in the Assignment of Claims clause of this contract, the assignee shall provide the assignee EFT information required by paragraph (d) of this clause. In all respects, the requirements of this clause shall apply to the assignee as if it were the Contractor. EFT information which shows the ultimate recipient of the transfer to be other than the Contractor, in the absence of a proper assignment of claims acceptable to the Government, is incorrect EFT information within the meaning of paragraph (e) of this clause.

(j) Payment office discretion. If the Contractor does not wish to receive payment by EFT methods for one or more payments, the Contractor may submit a request to the designated payment office to refrain from requiring EFT information or using

the EFT payment method. The decision to grant the request is solely that of the Government.

(k) Change of EFT information by financial agent. The Contractor agrees that the Contractor's financial agent may notify the Government of a change to the routing transit number, Contractor account number, or account type. The Government shall use the changed data in accordance with paragraph (e)(2) of this clause. The Contractor agrees that the information provided by the agent is deemed to be correct information as if it were provided by the Contractor. The Contractor agrees that the agent's notice of changed EFT data is deemed to be a request by the Contractor in accordance with paragraph (e)(2) that no further payments be made until the changed EFT information is implemented by the payment office.

ADDENDUM NO. 3 - EVALUATION PROCESS

COMPETITIVE NEGOTIATED PROCUREMENT USING QUALITATIVE CRITERIA

The scientific data buy procurement is part of NASA's intent to augment and where practical replace traditional contracting methodologies by instituting new ways of doing business that reflect a faster, better, cheaper way of carrying out its mission. Thus, each response will be examined for the innovations which are critical to obtaining the data sets more efficiently. Innovation in both the technical and procurement processes are considered an important factor and can be demonstrated throughout the proposal in such direct elements as data acquisition and delivery and in such indirect elements as data rights.

This procurement will be conducted utilizing Best Value Selection (BVS), which seeks to select an offer based on the best combination of price and qualitative merit of the offers submitted and reduce the administrative burden on the offerors and the Government. BVS predefines the value characteristics which will serve as the discriminators among offers.

BVS evaluation is based on the premise that, if all offers are of approximately equal qualitative merit, award will be made to the offeror(s) with the lowest evaluated price. However, the Government will consider awarding to an offeror(s) with higher qualitative merit if the difference in price is commensurate with the added value. Conversely, the Government will consider making award to an offeror whose offer has lower qualitative merit if the price differential between it and other offers warrants doing so.

The following value characteristics establish what the Government considers to be valuable in an offer. These value characteristics are performance based and permit selection of the offer which provides better results for a reasonable marginal increase in price. Price and technical will be considered equal in importance and will not be assigned weights. On those value characteristics the offeror chooses to provide, adequate information should be submitted to permit proper evaluation. The value characteristics are:

- The degree to which the offered data meets the scientific requirements of the solicitation; and
- The degree to which the offered data meets the business and performance requirements of the solicitation, such as, the basis for the price quotation, arrangements for property rights, and consistency of the overall offer with the goals of the RFO.

The Government will evaluate offers in the following general steps:

(a) An initial evaluation will be performed to determine if all required information has been provided and the offeror has made a reasonable attempt to present an acceptable offer. Offerors may be contacted, by the Contracting Officer, only for

clarification purposes during the initial evaluation. Offerors determined not to be acceptable shall be notified of their rejection and the reasons therefor and excluded from further consideration.

(b) All acceptable offers will be evaluated against the requirements of the RFO, including the value characteristics listed above. Two groups of reviewers, a Science Evaluation Group and a Price and Performance Group, will conduct the reviews, as follows:

(1) Science Characteristics

Each response to the RFO will be evaluated on the submittal's demonstrated understanding of and response to the science research theme or EOS measurement it is attempting to address. Some important characteristics of the science evaluation include:

(i) Is the necessary information present to perform a comprehensive evaluation.

(ii) The relevance of the proposed data set or product to the MTPE research themes or EOS measurement sets identified in this RFO.

(iii) The approach to providing a data set or product that addresses the MTPE research theme or EOS measurement set.

(iv) Best science value of the approach to other approaches of providing data sets or products.

(2) Price and Performance Characteristics

Each response to the RFO will be evaluated on the submittal's demonstrated understanding of and response to the economic factors that impact the cost effectiveness of the information package. For example, NASA realizes that licensing and other arrangements for intellectual property protection are inextricably related to pricing, use and fair market value of the data and data products. These characteristics include:

(i) Price efficiency factors related to the reasonableness of the price quotation. Is the basis clearly explained for the proposed price to NASA of the data or data product? This basis may include such factors as the extent to which the vendor accepts a major portion of the up-front financial risk and special requirements of the identified science community, including data types, delivery characteristics and archiving, multi-site licensing, and other factors.

(ii) The arrangements under which the offeror intends to handle non-proprietary use of space acquired data; the proprietary use of data for scientific evaluation and reporting; and any restrictions imposed on the uses for reporting and publication.

(iii) The past performance and the ability of the vendor to supply the data/data products as proposed, that is, the credibility of the vendor and

the offer. Considerations influencing this factor include past performance of the company on other projects, any current backlog and responses to similar orders. In general, an important consideration is the overall reputation of the company as a credible supplier and the risk NASA must assume as the procurer.